Hyperlink below will take you to DCSRM MRAD which does the studies. From the MRAD home page go to the top of the screen and click "Current Staffing Models"; next go to the left side of the page, scroll down, and click on "Personnel Proponency"; now click on "Description of Work" or "Model" and you will find work center descriptions (WCD). The WCD is Chapter 6 of the 27 Oct 92 Manpower Staffing Standards System (MS-3) Final Report what the manpower folks determined were Personnel Proponency functions and based proponent staffing requirements.
http://www-tradoc.monroe.army.mil/tma/index.html

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND
OFFICE OF THE CHIEF OF STAFF
FORT MONROE, VIRGINIA 23651-5000

REPLY TO
ATTENTION OF

ATRM-T (570-5a)

27 OCT 1992

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Manpower Staffing Standards System (MS-3) Final Report (FIN-REP) for Personnel Proponent

1. The Personnel Proponent Final Report is approved and will be applied in the next TRADOC Review of Manpower. This update identifies manpower requirements for military, regimental, and civilian personnel proponency in TRADOC.

2. POC is Mr. Phillips, AUTOVON 680-2214.

John P. Herrling

JOHN P. HERRLING
Major General, GS
Chief of Staff

Encl

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ATRM-T
SUBJECT: Manpower Staffing Standards System (MS-3) Final Report (FIN-REP) for Personnel Proponent

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MANPOWER STAFFING STANDARDS STUDY

FINAL REPORT

(FIN-REP)

for

PERSONNEL PROPONENT
UPDATE

COMMAND UNIQUE STANDARD

er Title

Proponent

AFD (SWC)
Code

PAD

TRADOC
TRAMEA FIELD TEAM
FORT LEE, VIRGINIA
20 DECEMBER 1991

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PART ONE - ADMINISTRATIVE DATA

PART ONE - ADMINISTRATIVE DATA

CHAPTER 1 - INTRODUCTION

PART I - ADMINISTRATIVE DATA

CHAPTER 1 - INTRODUCTION

1-1. Overview.

a. Study Function. This Manpower Staffing Standards System (MS-3) Final Report (FIN-REP) Update provides a means to determine manpower requirements for U.S. Army Training and Doctrine Command (TRADOC), U.S. Army Health Services Command (USAHSC), and U.S. Army Special Operations Command (USASOCOM) Personnel Proponent functions as defined in the AR 611 Series and AR 600-3. The principal functional responsibility of the Personnel Proponent work center is to provide recommendations relating to personnel management matters to the Deputy Chief of Staff for Personnel (DCSPER). This mission is accomplished by personnel management of Functional Areas (FAs), Areas of Concentration (AOCs), Military Occupational Specialties (MOSs), MOS Codes (MOSCs), Civilian Occupational Series, Enlisted Personnel Career Management Fields (CMFs), and all Skill and Language Identifiers.

b. Work Center. This study covers the Personnel Proponent functions workload; however, the following proponent workload will be excluded:

(1) Branch Proponent: The Branch Proponent is the commandant or director of the respective school or institution that develops concepts, doctrine, tactics, techniques, procedures, organization designs, materiel requirements, training programs, training support requirements, manpower requirements (except as provided in AR 600-3), education requirements, and related matters for a branch of the Army.

(2) Specified Proponent: The Specified Proponent is the commander or chief of any agency responsible for a designated area that does not fall within the purview of a Branch Proponent. Specified Proponents will have the same responsibilities as Branch Proponents.

(3) Functional Proponent: The Functional Proponent is the commander or chief of an organization or staff element that is the operative agency charged with the accomplishment of a particular function(s).

c. Baseline Requirements. The Personnel Proponent 0291 TDA (Para 502) baseline consists of 357 requirements and the standard earns 283 requirements. Spaces not performing Personnel Proponent workload were excluded from the baseline. Part One, Chapter 5, Figure 5-1 depicts the Required, Authorized, Assigned and the Standard Yield Requirements for installations for which this standard is applicable.

d. Study Costs/Cost Savings. The total costs/savings associated with this study are located in Part One, Chapter 5, Program Management Data Sheet, DA Form 5276-R.

e. Standard Development.

(1) TRADOC is the designated Department of the Army (DA) proponent command responsible for this study. The resulting MS-3 standard update is Command Unique. The TRADOC Management Engineering Activity (TRAMEA) Field Team at Fort Lee, VA, is the designated Lead Team and is responsible for conducting the study. This function was studied in its entirety.

(2) This FIN-REP Update was preceded by Measurement Plan resolutions impacting standard development as discussed in Part One, Chapter 2. A Trial Application was conducted by the Lead Team to test the applicability of the standard developed and to identify any exceptions not previously identified.

(3) All approved additives were developed. These additives were included in the determination of the work center's manpower requirements. WCDs for the approved additives are included in Part Two, Chapter 6 of this FIN-REP Update.

(4) Manpower Staffing Standards are an expression of manpower required for the performance of a given set of functionally homogeneous tasks at varying levels of workload. The process for developing this staffing standard was divided as follows:

(a) Study Plan (SP) Development. The current Personnel Proponent MS-3 Standard was used as a basis for a draft SP. Two additional categories of work (U.S. Army Regimental System and Civilian Proponent) were identified and incorporated into the WCD. A workshop was conducted at Fort Eustis, VA, with HQDA Functional Proponent personnel, Command Functional Proponent personnel, various school Personnel Proponent personnel, and TRAMEA personnel. The SP was developed from the comments for additions, deletions, and editing provided by the various participants.

(b) Measurement Phase. During the measurement phase, input teams carried out the provisions of the SP measurement instructions. Teams collected workload data and conducted measurement within the work center utilizing the operational audit (OA) measurement method to include historical performance and technical estimate techniques. Input Measurement Reports (MEAS-REPs) were prepared by each input team to document monthly man-hours, related workload, and work center comments.

When historical counts were available for work units, these counts were used as the frequency of occurrence for the corresponding tasks. Technical estimates were used for frequencies and per accomplishment times (PATs) when actual or historical data were not available. Workload factor (WLF) counts were based on historical data.

(c) Computation Phase. The Lead Team analyzed the results of the measurement and data collection with the objective of establishing the appropriate mathematical relationships that exist between workload and required man-hours. Data adjustments to measurement inputs were coordinated with the TRAMEA input team lead analysts and functional proponents at all measurement sites. Lead Team then prepared the FIN-REP Update, which details standard development and application procedures.

(d) Application and Maintenance Phase. During the initial application phase, the standard was applied to the entire universe for which it was developed using the application instructions found in Part Two, Chapter 6 of this FIN-REP Update. Results of this application were used to make final adjustments to the standard. Following incorporation of any final adjustments, TRADOC and U.S. Army Force Integration Support Agency (USAFISA) approve the standard, and installations document application results. Application will occur annually; maintenance will commence with approval and continue throughout the life of the standard.

f. Staffing Guides. The manpower staffing standard developed under this study will replace the Personnel Proponent FIN-REP, 18 July 1988 (R). There are no staffing guides for Personnel Proponent.

g. Authority. The authority for conducting this MS-3 study update is:

(1) AR 570-5, 30 June 1989, Manpower Staffing Standard System (MS-3).

(2) Message, TRADOC, ATTG-R, 291101Z Aug 90, Subject: Personnel Proponent Efficiency Review/Manpower Staffing Standards System (ER/MS-3) Study.

1-2. BACKGROUND.

a. The current standard for Personnel Proponent was approved 18 July 1988 (R). Due to the age of the standard and workload variations (Regimental and Civilian Proponent) within Personnel Proponent which have evolved since current standard development, an update was deemed appropriate to capture required work. Also, several proponent work centers were dissatisfied with use of consolidated WLF counts.

b. Manpower Requirements Criteria (MARC) Studies. AR 570-2, MARC - Table of Organization and Equipment (TOE) does not list any studies on the Personnel Proponent function. There are no similar Modified Table of Organization and Equipment (MTOE) work centers performing this type of workload.

1-3. APPLICABILITY.

a. Agencies/Commands Covered. This is a Command Unique Standard for Personnel Proponent functions throughout TRADOC, with voluntary participation by USAHSC and USASOCOM. The standard developed will apply to Personnel Proponent functions listed at Figure 1-1.

b. Agencies/Commands Not Covered. The U.S. Army Chaplain School, Fort Monmouth, NJ, TRADOC, will not be covered by this standard. U.S. Army Chief of Chaplains is responsible for this workload.

1-4. UNIVERSE IDENTIFICATION.

a. A matrix showing work center and total TDA requirements, authorizations, and assigned strength by location and command is provided at Figure 1-1. Activities participating in this study are identified by Unit Identification Code (UIC). The measurement locations are identified by an asterisk. All functions will apply to all activities of the universe except where noted in the work center standard and the development comments in Part One, Chapter 2 of this FIN-REP Update. The 0291 TDA was the source used to document this information and verified by each input team and Personnel Proponent work center. Assigned strength was reported as of 31 Jul 91.

b. The Required, Authorized, and Assigned counts for Fort Devens, MA, are included in the counts for Fort Huachuca, AZ, since they are listed on the Fort Huachuca TDA. However, separate measurement data, collected from both installations, were used to develop the standard. The standard will be applied separately to the installations.

1-5. MISSION, ORGANIZATION, AND FUNCTIONS.

a. Mission.

(1) The Personnel Proponent work center is responsible for providing recommendations for all career field related matters involved in the personnel life-cycle management functions. These functions include structure, acquisition, individual training and education, distribution, deployment, sustainment, professional development, and separation. Two processes which enable the personnel proponent activities to provide recommendations on their career fields are the functional

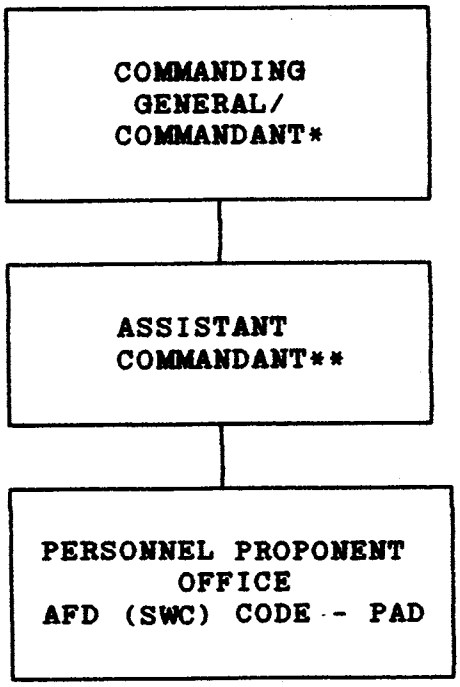
review (FR) process and functional area assessment (FAA). The FR provides a forum to express total personnel requirements for a FA and to assess the effects of force modernization for a complete FA. The FAA is a more in-depth, follow-on to the FR process. The FAA provides a detailed perspective on organization, materiel, training, doctrine and personnel.

(2) The approved Personnel Proponent Army Functional Dictionary (AFD) Standard Work Center (SWC) Code is PAD. The SWC Code title and definition as outlined in DA Pam 570-5 is: Personnel Proponent - Work center is involved in life-cycle structure to include analyzing/reviewing The Army Authorization Document System (TADDS) documents, evaluating system requirement documents, future authorizations/requirements, and Table of Distribution and Allowance (TDA)/Modified Table of Organization and Equipment (MTOE) change requests, recommending career field criteria, and assessing career field changes; controls life-cycle acquisition process by recommending personnel accession criteria/numbers and criteria for recall program to support mobilization requirements, providing Structure Manning Decision Review (SMDR) input, analyzing attrition data, determining Space Imbalance Military Occupational Specialty (SIMOS) and grade shortfalls, evaluating joint optical information network tapes, reviewing critical task lists, and maintaining Reserve Officers Training Corps (ROTC) accession program; maintains individual ROTC accession program; maintains individual training/education by identifying career field training criteria and educational opportunities, evaluating training documents, validating requests, recommending personnel exchange program; determining personnel requirements, and ensuring training is career enhancing; maintains personnel distribution process by evaluating career field inventory, assess FA personnel inventory, and recommending SIMOS initiatives; controls unit deployment process by evaluating mobilization effects and reviewing/preparing plan input; maintains sustainment process by recommending career field enhancements and officer Area of Concentration (AOC)/FA preferred pairings; establishes professional development programs by recommending selection/promotion board criteria and writing professional development material, maintains separation program by recommending exception to elimination, changes to retirement, and service obligation policies; participates/conducts special studies to include providing program budget guidance input and develops manpower/personnel integration (MANPRINT) concept career field requirements input; and prepares/manages career field issue meetings. Additional requirements have been added for Regimental and Civilian workload.

b. Organization and Function.

(1) The following organizational chart indicates the typical organizational structure of the Personnel Proponent. This structure which is depicted in AR 5-3, Installation Management and Organization, reflects the organizational alignment upon which this MS-3 standard was developed. There was no change from the previous MS-3 standard.

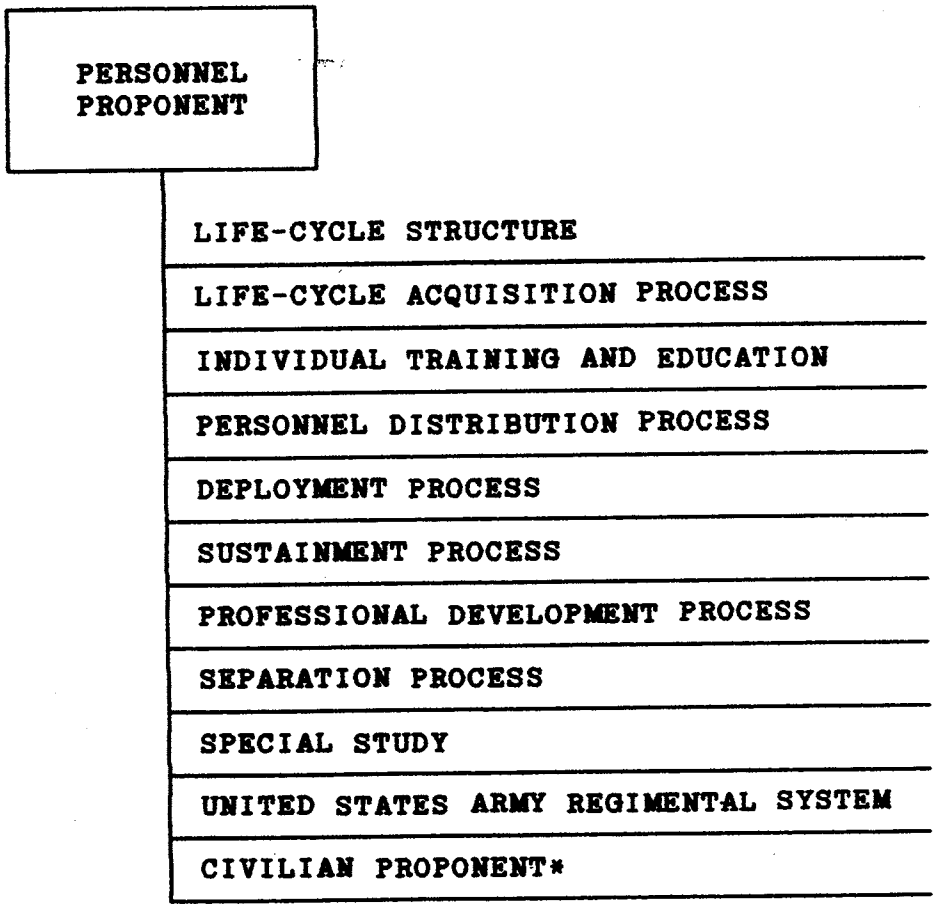
ORGANIZATIONAL CHART



*Position required for HSC is Surgeon General
**Position for USAHSC is Director Army Medical Department (AMEDD)/position for USASOCOM is Chief of Staff

(2) The functional diagram for Personnel Proponent is depicted below. This diagram differs from the functional diagram in the SP in that Civilian Proponent workload is now an additive to the WCD.

FUNCTIONAL DIAGRAM



*This will apply only at installations that have proponent responsibility for civilian job series.

1-6. PEACETIME VERSUS WARTIME MANPOWER STAFFING STANDARDS. Change in policy and procedures required mobilization requirements be identified. This change occurred in the computation phase of the Personnel Proponent MS-3 Study Update. A coordinated attempt by HQ TRADOC DCST and TRAMEA was made with no clear cut input to determine required workload or increases/decreases in the frequencies of remaining workload. Therefore, this effort will be addressed at the origination of the next Personnel Proponent MS-3 Study Update.

1-7. **CONTRACT SERVICES.** There were no contract services identified.

1-8. **STUDY PARTICIPANTS.** This plan was developed by the TRADOC TRAMEA Lead Team located at Fort Lee, VA. Army Unique Personnel Proponent MS-3 study participants and phone numbers are listed below:

a. Proponent Command: TRADOC.

b. HQDA Functional Proponent: MAJ Marv Searle, USAPIC, DDN 221-9100/5076

c. HQ TRADOC Functional Proponent: Mr. Robert Clements, DCST, DDN 680-5683

d. USAHSC Functional Proponent: Bebe Rose, HSCMEA, DDN 471-3634

e. USASOCOM Functional Proponent: Mr. Emanuel Perry, DDN 239-9002

f. USAFISA Action Officer: Mr. Roy Anderson, DDN 354-2534

g. HQ TRADOC/TRAMEA
Action Officer: Linda Monfalcone, DDN 680-3502

h. Lead Team Members:

(1) Team Chief: David M. Hanson, Chief, TRAMEA Field Team - Fort Lee, DDN 687-2527/1653

(2) Lead Analyst: Mike Donaldson, DDN 687-2527/1653
Assistant: Selena Perkinson, DDN 687-2527

i. MACOMs, Measurement Location, Analysts and Phone Numbers:

Command	Location	Name	DDN
TRADOC	Ft. Benning, GA	John Holland	835-5746
	Ft. Eustis (AVLS), VA	Deborah Blakely	927-4541
	Ft. Eustis (TRANS), VA	Mike Donaldson, Ft. Lee Team	687-2527
	Ft. Gordon, GA	Bob Arneson, Ft. Jackson Team	734-5461
	Ft. Knox, KY	Sherri Graham	464-3840

Command	Location	Name	DDN
	Ft. Ben Harrison, IN		
	(Fin)	Sherri Graham, Ft. Knox Team	464-3840
	(R&R)	Steve Bennett	464-3840
	(AG)	Steve Bennett	464-3840
	Ft. McClellan, AL (MPS)	Traci Fansler	865-5354
	Ft. McClellan, AL (CMLS)	Tom Self	865-5354
	Redstone Arsenal, AL (OMMCS)	Landon Rivers, Ft. McClellan Team	865-5354
	Ft. Huachuca, AZ	Paul Evans	821-1965
	Ft. Leavenworth, KS Career Development New Weapons Oper, Tng & Plans Force Development TRADOC Analysis Command (TRAC)	Frank Scharsch	552-5414
	Ft. Rucker, GA	Dorothy Churchman	835-5746
	APG, MD	Carolyn Barrow	298-7698
	Ft. Devens, MA	Deborah Blakely, Ft. Eustis Team	927-4541
USAHSC	Ft. Sam Houston, TX	Bebe Rose	471-3634
USASOCOM			
	Ft. Bragg, NC	Bob Arneson, Ft. Jackson Team	734-5461

UNIVERSE IDENTIFICATION

COMMAND: TRADOC INSTALLATION		UIC	PERSONNEL PROPONENT REQUIRED 0291 TDA	AUTHORIZED	ASSIGNED AS OF 31 JUL 91
ABERDEEN PROVING GROUND	(1) *	W1D4AA	17	11	13
FORT BENJAMIN HARRISON -		W1EXAA			
USAAG (ADJUTANT GENERAL)	(1) *		14	7	15
USAF (FINANCE)	*		5	4	3
USARR (RECRUITMENT & RETENTION)	*		8	4	5
FORT BENNING	*	W2L5AA	22	11	4
FORT BLISS		W1D2AA	24	16	15
FORT DEVENS	*		**		
FORT EUSTIS - USAAVLS	(1) *	W439AA	8	7	8
FORT EUSTIS - USATSCH	(1) *	W1D7AA	21	14	14
FORT GORDON	(1) *	WOU5AA	22	21	13
FORT HUACHUCA	(1) *	W1E8AA	** 22	12	19
FORT KNOX	*	W1DXAA	18	12	12
FORT LEAVENWORTH -					
USACACDA - (CD)	*	W3XUAA	0	0	1
USACACDA - (NUCLEAR WEAPONS)	*	W3XUAA	3	1	2
USACGSC - (OPER, TNG, & PLAN)	*	W2P2AA	2	0	2
USACGSC - (FORCE DEVELOPMENT)	*	W2P2AA	1	0	1
USATRAC - (OPER, RESEARCH/SYS ANALYSIS)	*	W4AEAA	5	4	3
FORT LEE	(1)	W1D5AA	17	13	16
FORT LEONARD WOOD	(1)	WOVLAA	18	12	12
FORT McCLELLAN - USACMLS	(1) *	WKX9AA	15	6	8
FORT McCLELLAN - USAMPS	(1) *	W4K8AA	14	7	7
REDSTONE ARSENAL - USAOMMCS	*	W1EAAA	9	5	16
FORT RUCKER	(1) *	WOU9AA	22	18	16
FORT SILL		W2NTAA	15	8	7
TRADOC SUB TOTAL			302	193	212
COMMAND: USASOCOM INSTALLATION		UIC	PERSONNEL PROPONENT REQUIRED	AUTHORIZED	ASSIGNED
FORT BRAGG	*	W1EOZZ	16	14	12
COMMAND: USAHSC INSTALLATION		UIC	PERSONNEL PROPONENT REQUIRED	AUTHORIZED	ASSIGNED
FORT SAM HOUSTON	(1) *	W3VZAA	39	27	43
GRAND TOTAL			357	234	267

*Measurement Locations

**Required, Authorized, and Assigned for Fort Devens are included in Fort Huachuca count.

NOTE: (1) These installations have the requirement to accomplish the Civilian Personnel Proponent mission.

FIGURE 1-1

PART ONE - ADMINISTRATIVE DATA

CHAPTER 2 - STANDARDS DEVELOPMENT INFORMATION

CHAPTER 2 - STANDARDS DEVELOPMENT INFORMATION

2-1. GENERAL. This chapter contains standards development information for the Personnel Proponent work center.

2-2. STATEMENT OF CONDITIONS (SOC). SOC is located in Part Two, Chapter 6.

2-3. WORK CENTER DESCRIPTIONS (WCDs). The WCDs for Personnel Proponent work center to include exceptions are in Part Two, Chapter 6, of this FIN-REP Update.

2-4. MANPOWER STANDARD AND TABLES (DA FORM 5279-R). Manpower standard and tables for Personnel Proponent are located in Part Two, Chapter 6, of this FIN-REP Update.

2-5. SELECTED MODEL.

a. The Type II standard equation developed for the Personnel Proponent work center is a multivariate equation using an "Officer Area of Concentration (AOC) Supported", "Warrant Officer (WO) Military Occupational Specialty Code (MOSC) Supported", and an "Enlisted MOS Supported" as the workload factors (WLFs). The Manpower Standards Development Systems (MSDS) statistical results and residuals for the direct staffing standard equation are provided at Figures 2-1 and 2-2.

b. The Indirect Man-hours were not measured. The indirect man-hours from the previously approved Personnel Proponent FIN-REP dated 18 July 1988 (R) were used to develop an equation which was combined with the direct man-hour equation. Statistical results, graph, and residuals for the indirect man-hours are provided at Figures 2-3, 2-4 and 2-5, respectively. Paragraph 2-11 addresses the indirect equation development to include measurement sites, justification for exclusions, and development of the consolidated equation. The Upper Extrapolation Limit is 5336.301, and Lower Extrapolation Limit is 907.5 ("a" value).

c. The Type I standard equation developed for the Civilian Proponent additive is a linear equation using "A Job Series Managed" as the WLF. The MSDS statistical results, graph and residuals for the selected staffing standard equation are provided at Figures 2-6, 2-7 and 2-8, respectively.

2-6. MEASUREMENT APPROACH.

a. The SP measurement instructions and data collection procedures were followed. The man-hours and associated work counts were collected in accordance with (IAW) approved MS-3 work measurement methods. The measurement method used was OA utilizing historical performance and technical estimate techniques.

b. Workload for Branch Proponent/Safety was identified for transfer from the Safety Study to the Personnel Proponent MS-3 Update for TRADOC Schools located on Non-TRADOC installations for inclusion in this work center. The decision was made to withdraw this workload by the MACOM Proponent. This issue will not affect the Personnel Proponent FIN-REP Update.

c. No minimum manpower, delay time, on-call time, or standby requirements were identified during measurement.

d. The SP WCD was used as the point of departure.

(1) The following additives were approved inclusion in this study. The additive WCDs and staffing equations are located in Part Two, Chapter 6, of this FIN-REP Update.

(a) Flight Proficiency Training

(b) Flight Proficiency Requirements

(c) Provider Care - USAHSC additive only

(d) Civilian Proponent - Installations that have proponent responsibilities for civilian job series

NOTE: Additives (a), (b), and (c) are previously USAFISA-approved for inclusion to applicable MS-3 studies.
Additive (d) is required proponent workload by regulation.

(2) The following additives were identified, however, upon review by the MACOM Functional proponent, were disapproved.

Additive	School	Man-hours
Branch Unit Readiness	USAARMS	46.05 (1)
Excellence in Armor	USAARMS	114.21 (1)
Future Readiness	USACMLS	145.00 (1)
	USAMPS	145.00 (1)
Advanced Assignment Program	USASIGS	67.00 (2)
Objective Force Structure Development	USAAHS	781.14 (3)
Teach-In Additive	USAAHS	(4)
Data System Additive	USAAHS	(4)

NOTES: (1) The majority of the tasks are covered in the existing standard.
(2) These tasks are not required proponent workload.
(3) These tasks were covered in the Combat Developments MS-3 Study.
(4) No documentation was provided for these two additives. USAAHS may submit documentation through proper channels when data have been collected.

e. There were no other additions, deletions, or modifications made to the WCD.

2-7. QUALITY ASSURANCE REVIEW OF INPUT TEAM MEASUREMENT REPORT.

a. All measurement forms were reviewed for compliance with AR 570-5 and SP measurement instructions. This review ensured man-hours and workload data represented like periods of time. Data were reviewed to ensure only required work was included. The quality assurance review included verification of the following items:

(1) Man-hours were included in the appropriate productive category when a worker was learning while producing.

(2) On-the-job-training (OJT) time expended by a worker in a directly supervised, OJT proficient status was treated as productive time.

(3) General military training, training that required Temporary Duty (TDY) and related travel time, and local training that was substituted for attendance at a formal course of instruction for which TDY would normally be required, were treated as non-available time.

(4) Training time was treated as productive time if it was of a recurring nature similar to, or in place of, normal OJT or proficiency training.

(5) Time for study of career development material was not included.

(6) Time for work center cleanup was treated as productive indirect.

(7) No Personal, Fatigue, and Delay (PF&D) allowances were used as the measurement method utilized the technical estimate and historical performance techniques.

(8) When varying Per Accomplishment Times (PATs) and Frequencies (FREQs) were encountered, measurement Input Teams submitted supplemental OAs, work sheets, or comments to document a derived FREQ or PAT.

b. A 100 percent mathematical audit of the OA forms and Work Unit (WU) data collection worksheets was conducted. Mathematical errors, lack of specific comments to clarify the measurement of a task, non-conformance to measurement instructions, or other inconsistencies in measurement data were identified. Examples of errors or omissions discovered during the quality assurance review included:

(1) WUs identified by the SP as applicable to more than one task; however, different FREQs for these tasks were used.

(2) WUs identified as the FREQ for a specific task, yet the FREQ for that task was different from the report WU.

(3) Specific and detailed comments to clarify the measurement of a task or the deviation from the SP measurement instructions were not always provided.

c. Quality assurance adjustments resulted in the correction of data such as transposition of numbers, key stroke errors, and math errors.

d. The review of measurement data worksheets and input team comments revealed Zero, No Historical Estimate (NHE), or Not Applicable (NA) tasks, which required adjustments. The Army Command mean for all other measurement locations was used for any tasks requiring adjustments. These adjustments were coordinated with and approved by the input teams and work center personnel.

e. Adjustments were made to Category 9 [Functional Area Assessments (FAA) and Functional Reviews (FR)] to normalize the frequencies for technical estimates to set the rate of occurrence at .5 per year. The normal rate of occurrence for FAAs and FRs is every other year.

f. The Army mean man-hours for Category 10 (Regimental) were added to Recruitment and Retention, Fort Benjamin Harrison, IN; Intelligence Center and School, Fort Devens, MA; Combined Arms Center (USACAC), Fort Leavenworth, KS; and TRADOC Analysis Command (TRAC), Fort Leavenworth, KS. These tasks are not required work at these installations; however, man-hours were credited using the Army mean for development of the equation and a subtractive developed for use when applying the standard.

g. A decision was made to develop an additive equation to capture Category 11, Civilian Proponent, workload for installations where applicable. The additive equation development is discussed at paragraph 2-14.

h. The proponent workload at USACAC, Fort Leavenworth, KS, was measured as five separate work centers. The HQ TRADOC proponent identified a requirement for only two proponent work centers. TRAC remained a separate work center and the other four were combined by the Lead Team. All proponent workload is assigned to USACAC versus individual work centers which were established by USACAC.

i. All measurement data were imported into MSDS. All correlation and regression analysis was performed using this USAFISA-approved software.

j. Review of the measurement data revealed that two measurement locations, Fort Bragg, NC, and Fort Gordon, GA, had high man-hours. These man-hours were analyzed in relation to other measurement locations. Using standard analytical principles, a new mean, standard deviation (SD), and control limits were developed for tasks within categories that were in excess of two standard errors of the estimate (Syx).

k. Spreadsheets, arrays, and scattergrams using MSDS and LOTUS 123 were developed to facilitate analysis. Data for all locations were arrayed by direct categories, WLF counts, WLF/measured man-hour ratios and assigned strength. These data were reviewed to determine the representativeness of the measured man-hours and work counts.

l. Original OA data, DA Forms 5277-R, WU data collection worksheets, WLF data collection worksheets, and all supplemental data, along with adjusted DA Forms 5277-R, used in the computation of the standard have been retained by the Lead Team.

2-8. DATA ADJUSTMENTS.

a. Category analysis was performed and identified categories requiring task analysis. Tasks were analyzed to minimize the effect of extreme values (high or low). Task analysis was performed to establish a monthly mean PAT and the upper and lower control limits (two standard deviations from the mean) for each task. This process identified any tasks that were extreme values and needed further analysis.

b. Tasks that were extreme values were referred back to the input teams for validation and justification. Input teams, in conjunction with the local proponent, determined if data should be revised or justification for retaining the original PAT was provided.

LOCATION

USAJFKSWCS - FORT BRAGG, NC

TASK	MEASURED PAT	ADJUSTED PAT
1.1.1.1.	60.00	12.38
1.1.2.2.	5.00	4.20
1.1.4.	12.00	9.42
1.2.1.	12.00	10.17
1.2.3.1.	15.00	6.90
1.2.3.6.	1.00	1.50
1.3.1.2.	15.00	14.01
1.3.1.3.	40.00	35.84
2.4.1.	222.00	39.74
2.4.2.	66.00	29.32
2.12.1.	4.00	2.35
2.12.2.	60.00	22.80
3.3.1.4.	90.00	39.78
3.5.1.	32.00	13.89
4.1.3.	192.00	23.69
4.2.	18.00	7.76
5.1.1.	16.00	10.41
5.1.2.	72.00	39.80
6.1.1.	9.00	7.26
6.1.2.	35.00	18.65
6.1.4.	12.00	10.19
6.3.2.	20.00	4.47
6.4.	12.00	8.97
7.1.	30.00	20.83
7.4.	12.00	11.00
9.1.1.1.	40.00	31.48
9.1.2.4.	24.00	22.31
10.1.2.	32.00	5.19
10.2.1.2.	8.00	1.02
10.2.1.3.2.	5.00	.62

USASIGS - FORT GORDON, GA

TASK	MEASURED PAT	ADJUSTED PAT
1.2.3.5.	111.670	25.02
3.1.	39.81	14.44
6.1.4.	25.00	10.19

c. The following matrix is provided to explain all adjustments made at each measurement location resulting in the allowed man-hours used for standard development.

PERSONNEL PROPONENT WORK CENTER
DETAILED MAN-HOUR ADJUSTMENTS

INSTALLATION	ORIGINAL MAN-HOURS (A)	ANALYSIS ADJUSTMENTS (B)	NEE/ ZERO ADJUSTMENTS (C)	CIVILIAN PROPONENT EXCLUDED MAN-HOURS (D)	FINAL ALLOWED MAN-HOURS (A)+(B)+(C)+(D)= (E)
FORT SAM HOUSTON	4095.08	- 170.74 (1)	+ 172.54	0	4096.86
FORT BRAGG	1604.97	- 401.72 (1&2)	0	0	1203.25
ABERDEEN PROVING GROUNDS	1598.93	- 104.18 (1)	+ 379.32	- 110.77	1763.34
FORT BENJAMIN HARRISON					
ADJUTANT GENERAL	2062.15	- 370.24 (1)	+ 28.95	0	1720.86
FINANCE	428.33	- 76.74 (1)	+ 320.68	0	672.27
RECRUITMENT & RETENTION	551.64	- 95.30 (1)	+ 262.18	0	869.48
		+ 150.96 (3)			
FORT BENNING	331.01	+ 72.51 (1)	+ 229.87	0	633.39
FORT DEVENS	151.64	+ 150.96 (3)	+ 507.80	0	736.92
		- 73.68 (1)			
FORT EUSTIS					
AVIATION LOGISTICS	715.33	- 201.77 (1)	+ 315.00	- 104.60	723.96
TRANSPORTATION	905.54	- 50.87 (1)	+ 170.61	- 120.26	905.02
FORT GORDON	3011.38	- 512.03 (1&2)	+ 197.42	- 155.37	2541.40
FORT HUACHUCA	1632.54	- 15.00 (1)	0	- 283.74	1333.80
FORT KNOX	677.24	- 74.53 (1)	+ 379.54	0	982.25
FORT LEAVENWORTH	778.62	+ 150.96 (3)	0	0	987.91
CAREER DEVELOPMENT		+ 12.52 (1)	0	0	
FORCE DEVELOPMENT		+ 26.72 (1)	0	0	
NUCLEAR WEAPONS		+ 22.02 (1)	0	0	
OPER, PLAN, & TNG		- 2.93 (1)	0	0	
FORT LEAVENWORTH TRAC	412.40	+ 150.96 (3)	+ 57.28	- 98.66(4)	521.98
FORT McCLELLAN					
CHEMICAL SCHOOL	775.11	- 72.55 (1)	+ 402.93	- .33(5)	1105.16
MILITARY POLICE	1555.27	- 159.11 (1)	+ 69.49	- 244.25	1221.40
FORT RUCKER	1478.61	- 36.89 (1)	+ 337.48	- 111.32	1667.88
REDSTONE ARSENAL	1506.82	- 3.33 (1)	+ 143.58	0	1647.07

NOTES: (1) Category 9, FA & FAA, adjustments to normalize the rate of occurrence at .5 per year.
(2) Upper and Lower Control Limit adjustments.
(3) Category 10, Regimental, man-hour credit.
(4) Man-hour exclusion since TRAC is not a recognized Civilian Proponent work center.
(5) Man-hour exclusion due to insufficient data for development.

d. The following is a display of changes by category of work by location. Category 9 man-hours show an overall total of NHE/O tasks and adjustments for rate of occurrence.

LOCATION	CAT 1	CAT 2	CAT 3	CAT 4	CAT 5	CAT 6	CAT 7	CAT 8	CAT 9	CAT 10	CAT 11
FORT SAM HOUSTON	17.61	24.98	64.56	.70	42.84	0	0	3.78	(158.19)	5.51	
FORT BRAGG	(65.50)	(25.26)	(13.24)	(66.33)	(12.00)	(59.44)	(18.67)	0	(92.00)	(42.26)	
ABERDEEN PROVING GROUND	49.14	2.12	63.27	12.38	1.72	0	0	7.92	139.70	(1.09)	(110.77)
FORT BENJAMIN HARRISON											
ADJUTANT GENERAL	5.75	0	17.35	0	0	0	0	5.85	(370.24)	0	
FINANCE	8.72	11.29	76.48	0	42.83	.72	0	6.21	83.66	14.03	
RECRUITMENT & RETENTION	85.36	0	4.89	18.31	0	24.73	15.92	6.20	11.42	150.96	
FORT BENNING	2.25	40.05	6.62	0	0	0	25.57	5.85	72.51	149.53	
FORT BEVENS	99.25	18.48	124.18	13.08	46.13	40.17	12.93	6.21	73.68	150.96	
FORT EUSTIS											
AVIATION LOGISTICS	0	0	31.54	0	0	16.26	0	3.35	(103.99)	166.07	(104.60)
TRANSPORTATION	47.16	9.12	56.74	0	0	24.73	0	5.85	(23.86)	0	(120.26)
FORT GORDON	(173.29)	0	(217.75)	0	0	(120.99)	0	0	0	0	(155.37)
FORT HUACHUCA	0	0	0	0	0	0	0	0	(15.00)	0	(283.74)
FORT KNOX	3.93	12.37	34.94	0	0	27.61	0	5.85	74.52	145.79	
FORT LEAVENWORTH											
CAREER DEVELOPMENT	0	0	0	0	0	0	0	0	12.52	150.96	
FORCE DEVELOPMENT	0	0	0	0	0	0	0	0	26.72	0	
NUCLEAR WEAPONS	0	0	0	0	0	0	0	0	22.02	0	
OPERATIONS, PLANS, & TNG	0	0	0	0	0	0	0	0	(2.93)	0	
FORT LEAVENWORTH, TRAC	0	0	0	0	49.36	0	0	7.92	0	150.96	(98.66)
FORT McCLELLAN											
CHEMICAL	63.64	15.94	81.41	9.57	46.18	24.87	5.46	7.92	72.51	2.88	(.33)
MILITARY POLICE	0	4.34	18.71	3.60	0	0	5.46	3.14	(156.32)	31.45	(244.25)
FORT RUCKER	8.36	6.83	22.93	0	46.18	0	0	3.78	61.53	150.96	(111.32)
REDSTONE ARSENAL	0	0	27.63	0	0	0	0	0	.49	112.13	

e. After all corrections and adjustments were made to measurement data, the adjusted man-hours were used to begin correlation and regression analysis of all WLFs.

2-9. CORRELATION AND REGRESSION ANALYSIS.

a. WLF Data.

(1) WLFs were reviewed to ensure representativenss of the measurement period (May 90 - Apr 91). WLF counts submitted by the input teams were verified against source documents. When a problem arose where there were varying WLF counts and adjustments were required, these adjustments were coordinated with the input team, local proponent and HQDA functional proponent. The matrix below shows a one-time count for each WLF.

LOCATION	WLFs											
	WLF #1	WLF #2	WLF #3	WLF #4	WLF #5	WLF #6	WLF #7	WLF #8	WLF #9	WLF #10	WLF #11	WLF #12
FT. SAM HOUSTON	9	99	52	3	0	0	7	32	9	0	105	1
FT. BRAGG	3	5	7	1	3	0	1	7	6	1	75	1
ABERDEEN PROVING GROUND	1	2	1	7	2	1	1	29	4	0	87	170
FT. BEN HARRISON/AG	1	4	5	3	1	0	2	24	2	2	25	53
FT. BEN HARRISON/FINANCE	1	1	0	0	0	0	1	3	0	0	21	1
FT. BEN HARRISON/R&R	0	0	0	0	0	0	1	3	1	1	21	1
FT. BENNING	1	3	8	0	0	0	1	5	6	5	48	0
FT. DEVENS	0	0	0	0	0	0	2	12	14	1	153	0
FT. EUSTIS/AVLS	1	1	2	1	2	2	1	19	6	1	59	0
FT. EUSTIS/TRANSPORTATION	1	5	3	2	0	2	1	16	3	0	59	63
FT. GORDON	2	9	6	4	3	3	4	39	34	1	179	137
FT. HUACHUCA	2	8	7	13	7	0	3	9	12	1	142	74
FT. KNOX	1	3	3	0	0	0	1	4	5	0	54	95
FT. LEAVENWORTH, CD	0	0	1	0	0	0	0	0	0	0	0	0
FT. LEAVENWORTH, FD	1	1	1	0	0	0	0	0	1	0	1	0
FT. LEAVENWORTH, HW	1	2	2	0	0	0	0	0	0	0	2	0
FT. LEAVENWORTH, OPT	1	1	0	0	0	0	0	0	1	0	0	0
FT. LEAVENWORTH, TRAC	1	7	1	0	0	0	0	0	0	0	0	0
FT. McCLELLAN, CMLS	1	3	1	0	0	0	1	1	1	1	14	1
FT. McCLELLAN, MPS	1	4	0	1	2	6	1	3	7	0	29	1
FT. RUCKER	1	4	30	17	33	6	2	9	8	1	87	8
REDSTONE ARSENAL	1	3	0	4	0	1	4	27	5	0	157	1

1. AN OFFICER BRANCH/FA SUPPORTED.
*2. AN OFFICER AREA OF CONCENTRATION SUPPORTED.
3. AN OFFICER SKILL SUPPORTED.
*4. A WARRANT OFFICER MILITARY OCCUPATIONAL SPECIALTY CODE SUPPORTED.
5. A WARRANT OFFICER ADDITIONAL SKILL IDENTIFIER SUPPORTED.
6. A WARRANT OFFICER SKILL QUALIFICATION IDENTIFIER MANAGED.
7. AN ENLISTED CAREER MANAGEMENT FIELD SUPPORTED.
*8. AN ENLISTED MILITARY OCCUPATIONAL SPECIALTY SUPPORTED.
9. AN ENLISTED ADDITIONAL SKILL IDENTIFIER SUPPORTED.
10. AN ENLISTED SKILL QUALIFICATION IDENTIFIER MANAGED.
11. A RESIDENT TRAINING COURSE.
12. A REGIMENTAL UNIT SUPPORTED.
*SELECTED WLFs

(2) WLFs #6 and #10 were not used in the correlation and regression phase. MACOM Functional Proponent requested skill qualification identifiers be dropped from the study.

(3) WLF #12 was not used in correlation and regression since there was no verifiable reporting system in existence.

(4) The WLFs selected are programmable, independent of work center control, collectable and relatable to the manpower requirements to the extent that any change in the value of the WLFs is expected to produce a corresponding change in the man-hours required to perform the mission.

b. Correlation and regression analysis was performed using the Army version of MSDS. This version utilizes the Least Squares Method of correlation and regression analysis. The upper and lower extrapolation limits displayed in this standard manpower table were calculated manually to accommodate the constructed equation.

2-10. REGRESSION ANALYSIS AND MODEL SELECTION.

a. Multivariate Model. All combinations utilizing multiple variables were tested and analyzed for possible model selection. A summary of regression analysis statistical parameters is at Figure 2-9.

(1) Although using WLFs 2, 5 and 8 produced a better R^2 (coefficient of determination) and V (coefficient of variation) which statistically indicates should be the model utilized, USAAVLS work center was outside two standard deviations. The model selected had the next best R^2 and V.

(2) An issue for decentralized proponent workload for geographically separated installations was raised by various work centers. Work centers stated there was a requirement for two separate schools. The consolidated WLFs used in the previous study did not allow separate application for this requirement. The selected model has resolved this issue.

b. Bivariate Model. All WLFs were tested using linear, power, ratio, and parabolic models. None were found to be statistically acceptable. Due to the variation of Officer, Warrant Officer, and Enlisted Specialties, at TRADOC, selection of a Bivariate Model was unacceptable.

c. Staffing Attributes.

(1) Realistic Criteria. The selected manpower model is considered realistic since manpower is positive for all values of workload greater than zero.

(2) Economic Criteria. The selected manpower model is considered economical since there is no increase in the average manpower cost per unit of workload as workload increases.

2-11. INDIRECT MAN-HOURS.

a. Indirect man-hours were not measured for this update. The indirect man-hours (Table 2-1) from the previously approved Personnel Proponent FIN-REP (R), 18 July 1988, were used to develop the indirect man-hour equation at Figure 2-3. This equation combined with the new mission equation will be used to determine the total manpower requirements for the Personnel Proponent function. Since the mission of the work center was changed, but not the indirect man-hour ratio required to support the mission, it was determined unnecessary to remeasure the indirect man-hours. The TRADOC and DA proponent agreed with this position.

WORKLOAD DATA

SCHOOL	INDIRECT MAN-HOUR	WLF ASSIGNED PERSONNEL
Adjutant General, Ft. Benjamin Harrison	147.13	2
Finance, Ft. Benjamin Harrison	142.58	1
Recruitment & Retention, Ft. Benjamin Harrison	264.00	2
Infantry, Ft. Benning	294.31	5
Aviation Logistics, Ft. Eustis	310.65	8
Transportation, Ft. Eustis	306.21	9
Chemical, Ft. McClellan	349.14	6
Military Police, Ft. McClellan	354.09	9
Ordnance, Missile, & Munitions, Redstone	372.80	10
Ordnance, Aberdeen Proving Ground	410.09	14
Aviation, Ft. Rucker	434.40	13
Armor, Ft. Knox	491.11	15
Intelligence, Ft. Huachuca (includes Ft. Devens	515.56	18
Signal, Ft. Gordon	586.26	23

TABLE 2-1

b. Measured indirect data from the previous study was extracted from the FIN-REP for the current measurement locations with the exception of John F. Kennedy Special Warfare Center and School (USAJFKSWCS), Fort Bragg and Academy of Health Sciences (USAAHS), Health Services Command, Fort Sam Houston, TX.

USAJFKSWCS was excluded as their indirect man-hours were suspected to have been influenced by the transition of this school from TRADOC to Special Operations Command (SOCOM). USAAHS was excluded as they were not representative of the normal universe at the time the indirect measurement was accomplished. They were responsible for only enlisted personnel. The standard indirect model is expected to apply to both these schools as USAAHS is now responsible for all soldiers not just enlisted and the transition of USAJFKSWCS to SOCOM has been completed. No adjustments or corrections were made to the data shown above.

c. Using MSDS and the data in Table 2-1, correlation and regression analysis was accomplished. A satisfactory bivariate linear relationship was found to exist. A matrix showing regression analysis is provided at Figure 2-10.

d. The mathematical simplification of the mission (direct) equation (Y_d) and the indirect (Y_i) results in the consolidated equation (Y_t) equal the total required man-hours to perform the Personnel Proponent mission. The mathematical simplification process is outlined below.

$$Y_t = Y_d + Y_i$$

$$Y_d = 649.953 + 24.6165X_1 + 33.2695X_2 + 29.1738X_3$$

$$Y_i = 172.486 + 18.9887X_1$$

X_1 = Mission Required Personnel = $Y_d/145$

$$Y_t = 649.953 + 24.6165X_1 + 33.2695X_2 + 29.1738X_3 + 172.486 + 18.9887Y_d/145$$

$$= 822.439 + 24.6165X_1 + 33.2695X_2 + 29.1738X_3 + 0.1309Y_d$$

$$= 822.439 + 24.6165X_1 + 33.2695X_2 + 29.1738X_3 + 0.1309(649.953 + 24.6165X_1 + 33.2695X_2 + 29.1738X_3)$$

$$= 822.439 + 24.6165X_1 + 33.2695X_2 + 29.1738X_3 + 85.0788 + 3.22229X_1 + 4.35498X_2 + 3.81885X_3$$

$$= 907.5 + 27.84X_1 + 37.62X_2 + 32.99X_3$$

2-12. EXTRAPOLATION LIMITS. The following upper and lower extrapolated man-hours were computed in accordance with (IAW) AR 570-5. The Manpower Standard and Table reflects 907.5 which is the "a" value of the equation because the lower extrapolation limit is less than the "a" value. Extrapolation steps used were:

Lower Extrapolation Limit:	502.369
Upper Extrapolation Limit:	5336.301

Max Yc = 4832.20
Min Yc = 1006.47

Y = 1680.337

Y-Extrap = 1680.337 x .30
= 504.101

Y_U = 4832.20 + 504.101
= 5336.301

Y_L = 1006.47 - 504.101
= 502.369

2-13. SKILL AND GRADE DETERMINATION.

a. The Standard Manpower Table is driven by stated requirements of AR 570-4, Manpower Management. Civilianization was accomplished as stated in the regulation.

b. The measurement teams' recommendations were arrayed and utilized to compute percentages by category of measured man-hours. This established ratios used in determining the break points for the manpower table. All skill requirements may be filled by any SC/MOS.

c. Category man-hours on input team spreadsheets were revised to include mathematical adjustments. Fractional man-hours were arrayed by skill and grade, by measurement location, and used as the basis for developing the manpower tables. Civilian personnel are identified by Series only. Military personnel are identified by Grade.

d. Final determination of civilian series and grades will be made by the supporting Civilian Personnel Office.

2-14. CIVILIAN PROPONENT ADDITIVE DATA ADJUSTMENTS.

a. The SP incorporated Civilian Proponent as a category of work in the Personnel Proponent work center. Through analysis, Lead Team determined civilian proponent workload applied only to specific installations. Lead Team and MACOM proponent agreed civilian proponent workload should be developed as an additive to the Personnel Proponent work center. See Part Two, Chapter 6, for applicable locations.

b. The review of measurement data worksheets and input team comments revealed Zero, No Historical Estimate (NHE), or Not Applicable (NA) tasks, which required adjustments. The Army mean for all other measurement locations was used for any tasks requiring adjustments. These adjustments were coordinated with and approved by the input teams and work center personnel.

c. Tasks were analyzed to minimize the effect of extreme values (high or low). Task analysis was performed to establish a monthly mean PAT and the upper and lower control limits (two standard deviations from the mean) for each task. Extreme values were identified for further analysis.

d. Tasks that were extreme values were referred back to the input teams for validation and justification. Input teams, in conjunction with location proponent, determined if data should be revised or justification for retaining the original PAT was provided.

LOCATION

USAOCS - APBERDEEN PROVING GROUND

TASK	MEASURED PAT	ADJUSTED PAT
11.1.1.	40.00	11.06
11.1.2.1.	8.00	41.56
11.4.1.	3.00	38.18
11.6.1.3.	4.00	19.64
USAAVLS - FORT EUSTIS		
11.1.2.1.	1.33	20.48
11.1.2.3.	80.00	15.75
11.1.5.	2.00	75.12
USAAVNC - FORT RUCKER		
11.3.1.	60.00	26.77
11.4.1.	180.00	40.48
11.4.2.	36.00	4.00
11.6.1.2.	75.00	23.66
USAMPS - FORT McCLELLAN		
11.1.6.	36.00	18.63
11.2.2.	324.00	29.21
11.4.2.	16.00	4.00
11.5.2.	12.00	161.37
11.5.3.	12.00	2.60
11.7.1.	80.00	20.36
11.7.2.	36.00	18.93

USAICS - FORT HUACHUCA

TASK	MEASURED PAT	ADJUSTED PAT
11.1.3.	6.00	16.00
11.1.4.	6.00	10.32
11.1.5.	10.00	75.12
11.1.6.	72.00	18.63
11.2.1.	32.00	5.69
11.3.1.	600.00	80.00*
11.3.2.1.	1.00	3.10
11.3.2.2.	.50	4.79
11.3.2.3.	.50	2.76
11.3.4.	3.00	9.00
11.4.1.	2.00	38.18
11.5.1.	216.00	25.66
11.5.3.	96.00	2.60
11.6.1.2.	1.00	15.54
11.6.1.3.	176.00	80.00**
11.6.1.4.	16.00	7.56
11.6.2.1.	16.00	4.08
11.6.2.2.	8.00	17.25
11.6.3.	2.00	11.21
11.6.4.	64.00	45.44
11.6.5.	.50	14.01
11.7.3.	8.00	25.43

*The UCL for this task is 26.77 hours; however, 80 hours is credited due to the effort expended by the work center to update the ACTEDS Plan annually. The update centers around constant changes to programs of instruction (POIs) and mission changes. The ACTEDS System is new and this Personnel Proponent office has been involved with the ACTEDS development from the beginning.

**The UCL for this task is 29.70 hours; however, 80 hours were credited because providing input for changes to regulations for the sustainment process requires 40 hours to develop and a 40-hour TDY to process for approval with HQDA, DCSINT, and PERSCOM.

The following matrix is provided to show all adjustments made at each measurement location resulting in the allowed man-hours used for standard development.

PERSONNEL PROPONENT WORK CENTER
DETAILED CIVILIAN PROPONENT MAN-HOUR ADJUSTMENTS

INSTALLATION	ORIGINAL MAN-HOURS (A)	ANALYSIS ADJUSTMENTS (B)	NHR/ ZERO ADJUSTMENTS (C)	EXCLUDED MAN-HOURS (D)	FINAL ALLOWED MAN-HOURS (A)+(B)+(C)+(D)= (E)
ABERDEEN PROVING GROUND, MD	110.77	+ 168.74	+ 86.76	0	366.27
FORT EUSTIS, VA - AVIATION LOGISTICS	104.60	- 57.27	+ 90.60	0	137.93
FORT EUSTIS, VA - TRANSPORTATION	120.26	0	+ 129.15	0	249.41
FORT GORDON, GA	155.57	0	+ 188.20	0	343.77
FORT HUACHUCA, AZ	283.74	- 113.88	0	0	168.86
FORT McCLELLAN, AL - MILITARY POLICE	244.25	- 37.66	0	0	206.59
FORT RUCKER, AL	111.32	- 51.24	+ 140.12	0	200.20

f. After all corrections and adjustments were made to measurement data, the adjusted man-hours were used to begin correlation and regression analysis of all WLFs.

2-15. CORRELATION AND REGRESSION ANALYSIS.

a. WLF Data.

(1) WLFs were reviewed to ensure representativeness of the measurement period (May 90 - Apr 91). WLF counts submitted by the input teams were verified against source documents. When a problem arose where there were varying WLF counts and adjustments were required, these adjustments were coordinated with the input team, local proponent and HQDA Functional Proponent. The matrix below shows a one-time count for each WLF.

LOCATION	WLFs	
	WLF #13	WLF #14
ABERDEEN PROVING GROUND	5	68
FT. EUSTIS/AVLS	1	12
FT. EUSTIS/TRANSPORTATION	1	40
FT. GORDON	7	50
FT. HUACHUCA	2	8
FT. McCLELLAN, MPS	1	12
FT. RUCKER	2	3

13. A CIVILIAN CAREER FIELD MANAGED
*14. A JOB SERIES MANAGED

* SELECTED WLF

(2) The WLF selected is programmable, independent of work center control, collectable and relatable to the manpower requirements to the extent that any change in the value of the WLF is expected to produce a corresponding change in the man-hours required to perform the mission.

b. Correlation and regression analysis was performed using the Army version of MSDS. This version utilizes the Least Squares Method of correlation and regression analysis.

2-16. REGRESSION ANALYSIS AND MODEL SELECTION.

a. Bivariate Model. All WLFs were tested using linear, power, ratio, and parabolic models. The statistics generated using X13 were not as acceptable as the model using X14. A matrix showing the regression analysis is provided at Figure 2-11.

b. Multivariate Model. The model utilizing X13 and X14 was not acceptable as the confidence level of .90 or greater could not be obtained using X13 in the equation.

c. Staffing Attributes.

(1) Realistic Criteria. The selected manpower model is considered realistic since manpower is positive for all values of workload greater than zero.

(2) Economic Criteria. The selected manpower model is considered economical since there is no increase in the average manpower cost per unit of workload as workload increases.

DIRECT STATISTICS

WORK UNIT ORDER OF ENTRY	INTERMEDIATE R VALUES	INTERMEDIATE R2 VALUES
2. AN OFCR AOC SUPPORTED.	0.8234	0.6780
8. AN ENLISTED MOS SUPPORTED.	0.9302	0.8652
4. A WO MOSC SUPPORTED.	0.9475	0.8978

EQUATION & STATISTICS

A	R	R2	SY	V	F
649.9526	0.9475	0.8978	293.8963	0.2204	43.9228

WORK UNIT	B(I)	T(I)	CONF LEV
AN OFCR AOC SUPPORTED.	24.61646900	7.140	0.999997
A WO MOSC SUPPORTED.	33.26947294	2.187	0.955000
AN ENLISTED MOS SUPPORTED.	29.17382691	4.526	0.999598

EXTRAPOLATION LIMITS	Y-UPPER	Y-LOWER
	4520.364	649.953

FIGURE 2-1

DETAILED OUTPUT FOR MULTIVARIATE MODEL

	Location	Actual y	Predicted yc	(y - yc)	Outside ±2σ
HS	AHS	4096.862	4120.354	-23.492	0.000
SP	FT BRAGG	1203.246	1010.521	192.725	0.000
TC	ABERDEEN	1763.339	1778.113	-14.774	0.000
TC	FT BEN/AG	1720.855	1548.399	172.456	0.000
TC	FT BEN/FIN	672.274	762.091	-89.817	0.000
TC	FT BEN/R&R	869.477	737.474	132.003	0.000
TC	FT BENNING	633.389	869.671	-236.282	0.000
TC	FT DEVENS	736.720	1000.039	-263.319	0.000
TC	FT EUSTIS/AVL	723.955	1262.141	-538.186	0.000
TC	FT EUSTIS/TRANS	905.016	1306.355	-401.339	0.000
TC	FT GORDON	2541.388	2142.358	399.030	0.000
TC	FT HUACHUCA	1333.803	1541.952	-208.149	0.000
TC	FT KNOX	982.250	840.497	141.753	0.000
TC	FT LVN/CD/CACDA	987.910	748.419	239.491	0.000
TC	FT LVN/TRAC	521.978	822.268	-300.290	0.000
TC	FT MCCLELLAN/CML	1105.164	752.976	352.188	0.000
TC	FT MCCLELLAN/MP	1221.403	869.209	352.194	0.000
TC	FT RUCKER	1667.876	1576.564	91.312	0.000
TC	REDSTONE	1647.069	1644.573	2.496	0.000
	TOTALS	25333.974	25333.974	0.000	

WORK UNIT TITLES:
2. AN OFCR AOC SUPPORTED.
4. A WO MOSC SUPPORTED.
8. AN ENLISTED MOS SUPPORTED.

MANPOWER TABLE RANGE

AAF:	135.0	140.0	143.670	145.0
START:	5	5	5	5
END:	33	32	31	31

FIGURE 2-2

INDIRECT STATISTICS

WORK UNIT TITLE: ASSIGNED PERSONNEL

	MODEL 1 LINEAR	MODEL 2 POWER	MODEL 3 RATIO	MODEL 4 PARABOLA
r	0.95561	0.95470	0.91373	0.95933
r2	0.91319	0.91145	0.83490	0.92031
a	172.48599521	143.41110996	0.00989315	152.62076403
b	18.98871161	0.42566810	0.00150291	24.33208077
c				-0.241
syx	39.17161	39.56210	54.02224	39.20008
v	0.11016	0.11126	0.15192	0.11024
TESTS				
REALISTIC	PASSES	PASSES	PASSES	PASSES
ECONOMIC	PASSES	PASSES	PASSES	PASSES
F	126.23964	123.52419	60.68257	63.51945
LEV SIG	0.000000	0.000000	0.000005	0.000001
	PASSES	PASSES	PASSES	PASSES
Tc				0.991
LEV SIG				0.342868
				FAILS
EXTRAPOLATION LIMITS				
(Man-hours)				
UPPER	715.904	606.547	544.325	661.675
LOWER	172.486	36.734	0.000	152.621
RATIO ASYMPTOTE			665.375	
PARABOLA X-APEX				50.477
PARABOLA Y-APEX				766.722
SIAF USED: NONE				

UPPER WORKLOAD VALUE FOR THE RATIO = 29.600
UPPER WORKLOAD VALUE FOR THE PARABOLA = 29.600
LINEAR LOWER EXTRAPOLATION LIMIT SET AT INTERCEPT
RATIO LOWER EXTRAPOLATION LIMIT SET AT ZERO
PARABOLA LOWER EXTRAPOLATION LIMIT SET AT INTERCEPT

FIGURE 2-3

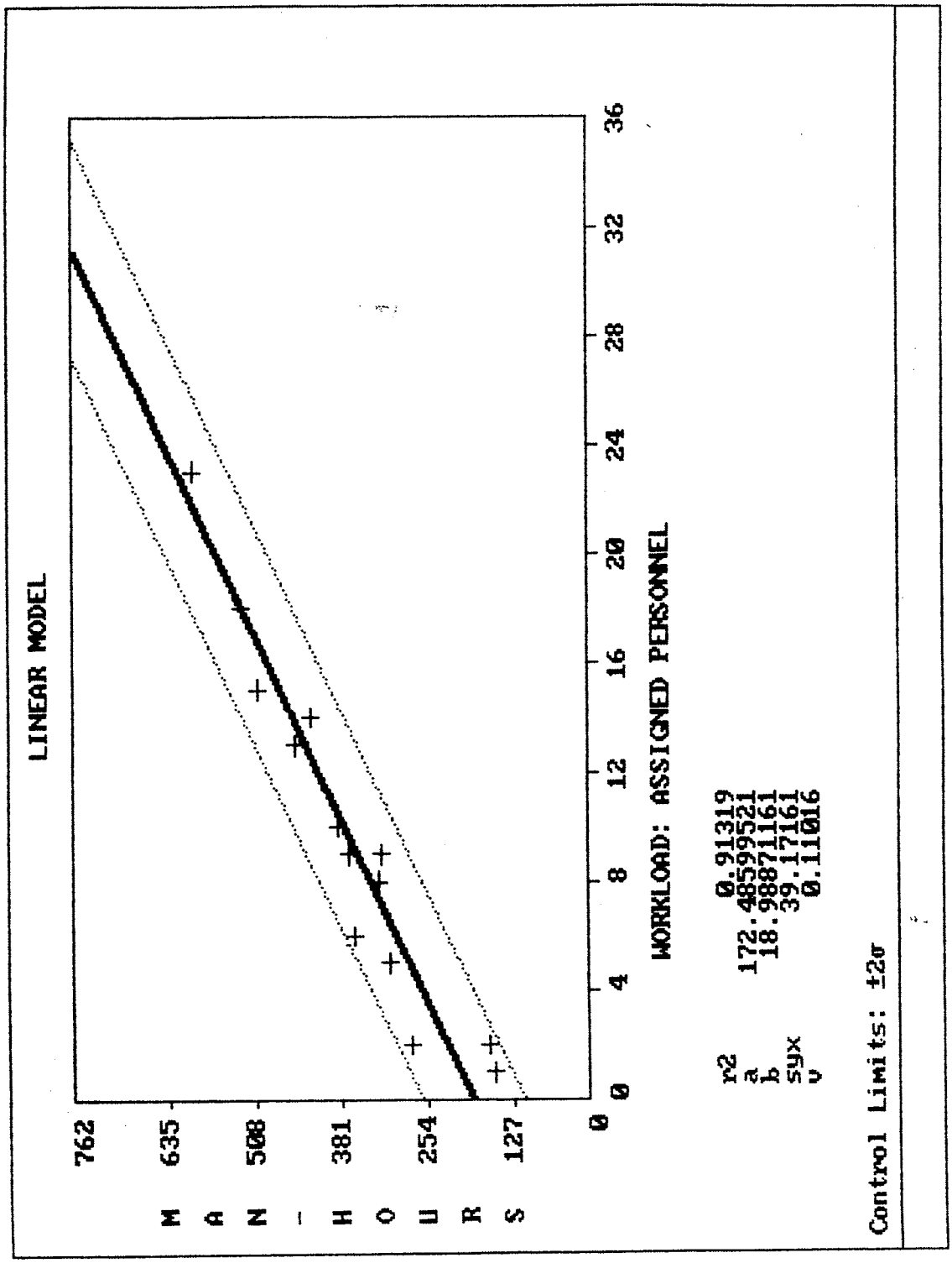

LINEAR MODEL
MAN-HOURS
762
635
508
381
254
127
0
0
4
8
12
16
20
24
28
32
36
WORKLOAD: ASSIGNED PERSONNEL
r2 0.91319
a 172.48599521
b 18.98871161
syx 39.17161
y 0.11016
Control Limits: ±2σ

FIGURE 2-4

INDIRECT RESIDUALS

DETAILED OUTPUT FOR LINEAR MODEL

Location	x	Actual y	Predicted yc	(y - yc)	Outside ±2σ
TRA AG FT BEN H	2.00	147.130	210.463	-63.333	0.000
TRA R&R FT BEN H	2.00	264.000	210.463	53.537	0.000
TRA FINANCE FT BEN H	1.00	142.580	191.475	-48.895	0.000
TRA INFANTRY	5.00	294.310	267.430	26.880	0.000
TRA AVIATION LOGISTI	8.00	310.650	324.396	-13.746	0.000
TRA TRANSPORTATION	9.00	306.210	343.384	-37.174	0.000
TRA CHEMICAL	6.00	349.140	286.418	62.722	0.000
TRA MILITARY POLICE	9.00	354.040	343.384	10.656	0.000
TRA MUNITIONS	10.00	372.800	362.373	10.427	0.000
TRA ORDNANCE	14.00	410.090	438.328	-28.238	0.000
TRA AVIATION RUCKER	13.00	434.400	419.339	15.061	0.000
TRA ARMOR	15.00	491.110	457.317	33.793	0.000
TRA INTELLIGENCE	18.00	515.560	514.283	1.277	0.000
TRA SIGNAL	23.00	586.260	609.226	-22.966	0.000
TOTALS		4978.280	4978.280	0.000	

WORK UNIT TITLE: ASSIGNED PERSONNEL

MANPOWER TABLE RANGE

AAF:	135.0	140.0	143.670	145.0
START:	2	2	2	2
END:	5	5	5	5

FIGURE 2-5

CIVILIAN ADDITIVE STATISTICS

WORK UNIT TITLE: A JOB SERIES MANAGED.

	MODEL 1 LINEAR	MODEL 2 POWER	MODEL 3 RATIO	MODEL 4 PARABOLA
r	0.92452	0.85406	0.70929	0.93088
r2	0.85473	0.72942	0.50309	0.86653
a	151.16976907	94.42806022	0.02371498	165.29632403
b	3.19089957	0.30641483	0.00273232	1.54063399
c				0.02417
syx	36.09152	49.25730	66.75114	38.67823
v	0.15092	0.20597	0.27912	0.16173
TESTS				
REALISTIC	PASSES	PASSES	PASSES	FAILS
ECONOMIC	PASSES	PASSES	PASSES	FAILS
F	29.41931	13.47870	5.06225	12.98475
LEV SIG	0.002886	0.014423	0.074282	0.017814
	PASSES	PASSES	PASSES	PASSES
Tc				0.595
LEV SIG				0.584093
				FAILS
EXTRAPOLATION LIMITS				
(Man-hours)				
UPPER	430.373	371.673	332.961	453.581
LOWER	151.170	60.476	22.264	165.296
RATIO ASYMPTOTE			365.989	
PARABOLA X-APEX				-31.866
PARABOLA Y-APEX				140.749
SIAF USED: NONE				

LINEAR LOWER EXTRAPOLATION LIMIT SET AT INTERCEPT
PARABOLA LOWER EXTRAPOLATION LIMIT SET AT INTERCEPT

FIGURE 2-6

CIVILIAN ADDITIVE GRAPH

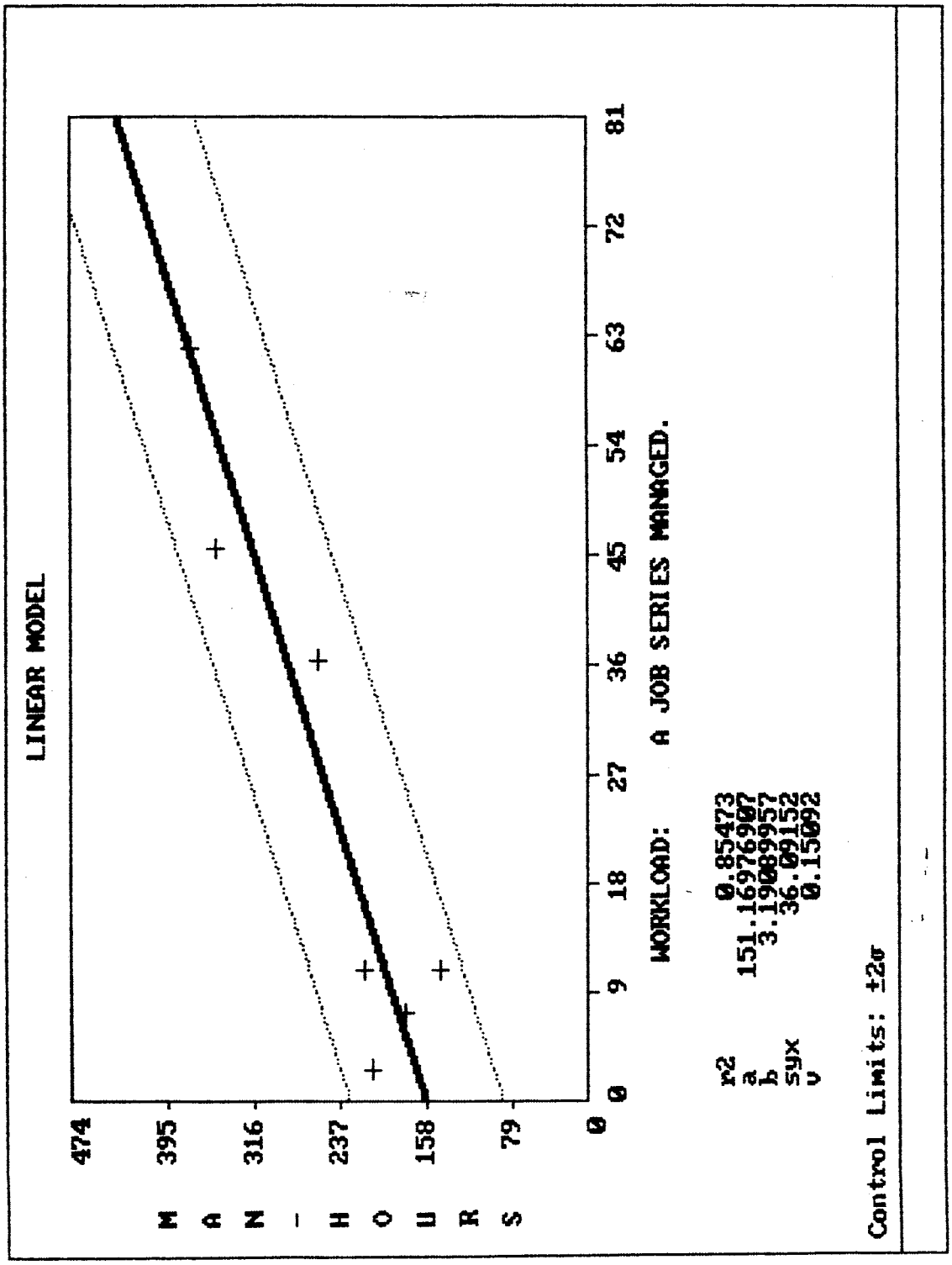


FIGURE 2-7

CIVILIAN ADDITIVE RESIDUALS

DETAILED OUTPUT FOR LINEAR MODEL

	Location	x	Actual y	Predicted yc	(y - yc)	Outside ±2σ
TC	ABERDEEN	68.00	366.274	368.151	-1.877	0.000
TC	FT EUSTIS/AVL	12.00	137.926	189.461	-51.535	0.000
TC	FT EUSTIS/TRANS	40.00	249.412	278.806	-29.394	0.000
TC	FT GORDON	50.00	343.766	310.715	33.051	0.000
TC	FT HUACHUCA	8.00	169.862	176.697	-6.835	0.000
TC	FT MCCLELLAN/MP	12.00	206.588	189.461	17.127	0.000
TC	FT RUCKER	3.00	200.204	160.742	39.462	0.000
	TOTALS		1674.032	1674.032	0.000	

WORK UNIT TITLE: A JOB SERIES MANAGED.

MANPOWER TABLE RANGE

AAF:	135.0	140.0	143.670	145.0
START:	2	2	1	1
END:	3	3	3	3

FIGURE 2-8

SUMMARY OF REGRESSION ANALYSIS STATISTICAL PARAMETERS

WORK CENTER: PERSONNEL PROPONENT - DIRECT MAN-HOURS

MODEL	WORKLOAD FACTOR	COEFFICIENT OF DETERMINATION r^2	COEFFICIENT OF VARIATION V	STANDARD ERROR OF ESTIMATE Syx	TEST OF SIGNIFICANCE 'F'	TEST OF SIGNIFICANCE 'T'	REALISTIC	ECONOMIC
Multi-variate	*X2,X4,X8	.8978	.2204	293.8963	Passed	Passed		
	X2,X5,X8	.8990	.2191	292.1207	Passed	Passed		
	X1,X4,X8	.8898	.2289	305.2277	Passed	Passed		
	X1,X3,X8	.8966	.2217	295.6034	Passed	Passed		
	X1,X7,X8	.8944	.2241	298.8016	Passed	Passed		
	X1,X5,X8	.8942	.2243	299.0900	Passed	Passed		
	X2,X7,X8	.8810	.2379	317.1540	Failed	Failed		
	X3,X7,X8	.8830	.2358	314.4235	Passed	Passed		
	X2,X3,X8	.8891	.2296	306.1045	Passed	Passed		
	X2,X8,X9	.8763	.2425	323.3020	Failed	Failed		
	X1 & X8	.8615	.2484	331.2558	Passed	Passed		
	X2 & X8	.8652	.2451	326.7971	Passed	Passed		
Bivariate (Linear)	X2	.6780	.3675	490.0136	Passed		Yes	Yes
(Power)	X2	0	0	0				
(Ratio)	X2	0	0	0				
(Parabola)	X2	.7125	.3579	477.2603	Passed	Passed	No	Yes
Bivariate (Linear)	X7	.7757	.3067	408.9780	Passed			
(Power)	X7	0	0	0				
(Ratio)	X7	0	0	0				
(Parabola)	X7	.8197	.2835	377.9522	Passed	Passed	No	No

X1 - An Officer Branch/FA Supported.
*X2 - An Officer Area of Concentration Supported.
X3 - An Officer Skill Supported.
*X4 - A Warrant Officer Military Occupational Specialty Code Supported.
X5 - A Warrant Officer Additional Skill Identifier Supported.
X6 - A Warrant Officer Skill Qualification Identifier Managed. (Dropped per EQ Proponent).
X7 - An Enlisted Career Management Field Supported.
*X8 - An Enlisted Military Occupational Specialty Supported.
X9 - An Enlisted Additional Skill Identifier Supported.
X10 - An Enlisted Skill Qualification Identifier Managed. (Dropped per EQ Proponent)
X11 - A Resident Training Course.
X12 - A Regimental Unit Supported.

*Selected Model

$Y_d = 649.953 + 24.6165X_1 + 33.2695X_2 + 29.1736X_3$

FIGURE 2-9

SUMMARY OF REGRESSION ANALYSIS STATISTICAL PARAMETERS

WORK CENTER: PERSONNEL PROPONENT - INDIRECT MAN-HOURS

MODEL	WORKLOAD FACTOR	COEFFICIENT OF DETERMINATION r^2	COEFFICIENT OF VARIATION V	STANDARD ERROR OF ESTIMATE Syx	TEST OF SIGNIFICANCE 'F'	TEST OF SIGNIFICANCE 'F'	REALISTIC	ECONOMIC
Bivariate								
(Linear)	*Xi	.9132	.1102	39.17161	Passed		Yes	Yes
(Power)	Xi	.9115	.1113	39.56210	Passed		Yes	Yes
(Ratio)	Xi	.8349	.1519	54.02224	Passed		Yes	Yes
(Parabola)	Xi	.9203	.1102	39.20008	Passed	Passed	Yes	Yes

*Xi - An Assigned Person Supported.

*Selected Model - selected for ease of application

Yi = 172.4[illegible] + 18.9067Xi

FIGURE 2-10

SUMMARY OF REGRESSION ANALYSIS STATISTICAL PARAMETERS

WORK CENTER: PERSONNEL PROPONENT - CIVILIAN PROPONENT ADDITIVE

MODEL	WORKLOAD FACTOR	COEFFICIENT OF DETERMINATION r^2	COEFFICIENT OF VARIATION V	STANDARD ERROR OF ESTIMATE Syx	TEST OF SIGNIFICANCE 'F'	TEST OF SIGNIFICANCE 'T'	REALISTIC	ECONOMIC
Bivariate								
(Linear)	*X14	.8547	.1509	36.0915	Passed		Yes	Yes
(Power)	X14	.7294	.2060	49.2730	Passed		Yes	Yes
(Ratio)	X14	.5031	.2791	66.7511	Passed		Yes	Yes
(Parabola)	X14	.8665	.1617	38.6782	Passed	Failed	No	No
Bivariate								
(Linear)	X13	.7373	.2030	48.5384	Passed		Yes	Yes
(Power)	X13	.6606	.2306	55.1492	Passed		Yes	Yes
(Ratio)	X13	.5968	.2514	60.1324	Passed		Yes	Yes
(Parabola)	X13	.7810	.2072	49.5489	Passed	Failed	No	No
Multi-variate	X13 & X14	.9090	.1336	31.9398	Failed	Failed		

X13 - A Civilian Career Field Managed.

*X14 - A Job Series Managed.

*Selected Model

Yc = 151.2 + 3.191X1

FIGURE 2-11

PART ONE - ADMINISTRATIVE DATA

CHAPTER 3 - PROGRAM ESTIMATING EQUATIONS (PEE)

CHAPTER 3 - PROGRAM ESTIMATING EQUATIONS (PEE)

3-1. GENERAL. Manpower staffing standards determine the manpower requirements needed to do the work described in a given work center. To make them more useful, they also include the effect that future workload volumes will have on a function's manpower requirements. The MS-3 predicts future manpower requirements by building manpower staffing standards that have programmable WLFs, by forecasting WLF volumes for manpower staffing standards that do not have programmable WLFs, and by developing PEEs that relate the results of manpower standards application to some workload volume that is programmable.

3-2. PEE. The WLFs for the Personnel Proponent MS-3 Standard are all programmable; therefore, a PEE is not required.

PART ONE - ADMINISTRATIVE DATA

CHAPTER 4 - GENERAL ADDITIONS

USAFAS	United States Army Field Artillery School, Fort Sill, OK
USAF	United States Army Finance Center, Fort Benjamin Harrison, IN
USAFISA	United States Army Force Integration Support Agency
USAHSC	United States Army Health Services Command
USAIS	United States Army Infantry School, Fort Benning, GA
USAICS	United States Army Intelligence Center and School, Fort Huachuca, AZ
USAISD	United States Army Intelligence School Devens, Fort Devens, MA
USAJFKSWCS	United States Army John F. Kennedy Special Warfare Center and School, Fort Bragg, NC
USAMPS	United States Army Military Police School, Fort McClellan, AL
USAOCS	United States Army Ordnance Center and School, Aberdeen Proving Ground, MD
USAOMMCS	United States Army Ordnance, Missile, and Munitions Center and School, Redstone Arsenal, AL
USAPIC	United States Army Personnel Integration Center
USAQMCS	United States Army Quartermaster Center and School, Fort Lee, VA
USARR	United States Army Recruitment and Retention, Fort Benjamin Harrison, IN
USASIGS	United States Army Signal School, Fort Gordon, GA
USASOCOM	United States Army Special Operations Command
USATSCH	United States Army Transportation School, Fort Eustis, VA
USATRAC	United States Army TRADOC Analysis Command - Operations, Research/Systems Analysis, Fort Leavenworth, KS
WCTF	Women in Combat Task Force
WO	Warrant Officer

PART ONE - ADMINISTRATIVE DATA

CHAPTER 5 - PROGRAM MANAGEMENT DATA

PROGRAM MANAGEMENT DATA

For use of this form, see AR 570-5; the proponent agency is DCSPER

REQUIREMENT CONTROL SYMBOL: CSGPA-1723

1. MACOM/FOA	2. TEAM/MACOM IDENTIFICATION AND LOCATION
TRADOC	☒ LEAD TEAM ☐ INPUT TEAM ☐ MACOM TRAMEA Field Team #9 - Fort Lee

2. DATE PREPARED	3. REQUIREMENTS AFFECTED	5. WORK CENTERS
20 December 1991	357	1

6. WORK CENTER TITLES/CODES
Personnel Proponent/PAD

7. STUDY COST COMPUTATIONS

GRADE (a)	MAN-HOURS (b)	SALARY FACTOR (c)	PERSONNEL COSTS (d)
GM-13	567.50	24.08	13,665.40
GS-12	1,976.70	20.25	40,028.18
GS-11	2,994.25	16.90	50,602.83
GS-09	2,903.00	13.97	40,554.91
GS-07	346.00	11.42	3,951.32
GS-06	794.00	10.27	8,154.38
GS-05	245.00	9.22	2,258.90

8. TOTAL MAN-HOURS	9. TOTAL PERSONNEL COSTS
9,826.45	$159,215.92
10. TEMPORARY DUTY COSTS	**11. TOTAL STUDY COSTS**
$3,898.76	$163,114.68

12. PRODUCTIVITY ENHANCEMENT STUDY

(a) TOTAL SAVINGS	
(b) IMPLEMENTATION COSTS	
(c) NET SAVINGS (a - b)	
(d) STUDY COSTS	
(e) NET SAVINGS TO COST RATIO (c ÷ d)	

13. STANDARDS DEVELOPMENT STUDY

STUDY DEVELOPMENT (a)	MEASUREMENT/ DATA COLLECTION (b)	ANALYSIS/ COMPUTATIONS (c)	REPORT/ APPROVAL (FIN-REP) (d)	INITIAL APPLICATION (e)	TOTAL COST (a+b+c+d+e) (f)	COST PER REQUIREMENT (f ÷ item 4) (g)
$68,358.96	$68,677.83		26,077.89		$163,114.68	$ 456.90

14. REMARKS

TOTAL STUDY COSTS (including 1.4213 Fring Factor) = $ 230,192.35

PERSONNEL COSTS ($159,215.92) times FRINGE FACTOR (1.4213) = $ 226,293.59

PLUS TDY COSTS = 3,898.76

TOTAL STUDY COSTS = $ 230,192.35

PERSONNEL PROPONENT APPLICATION RESULTS

INSTALLATION	0291 TDA REQ	0291 TDA AUTH	0291 TDA ASGN	FY 93 TRM	STD APP	CIV PROP ADD	PHYS ADD	AVN ADD	REG SUB	TOTAL REQUIREMENTS	DELTA
ABERDEEN PROVING GROUNDS	17	11	13	13	14.538	+ 2.539				17.077 = 17	+ 4
FORT BENJAMIN HARRISON -											
USAAG (ADJUTANT GENERAL) *	14	7	15	8	13.265	+ 1.439				14.707 = 14	+ 6
USAF (FINANCE) *	5	4	3	7	7.133					7.133 = 7	0
USARR (RECRUITMENT & RETENTION) *	8	4	5	3	6.941				-1.041	5.900 = 6	+ 3
FORT BENNING *	22	11	4	10	7.588					7.588 = 8	- 2
FORT BLISS	24	16	15	13	12.615					12.615 = 12	- 1
FORT DEVENS *	**				8.989				-1.041	7.948 = 8	**
FORT HUACHUCA	22	12	19	26	13.215	+ 1.219				14.434 = 14	- 4
FORT EUSTIS - USAAVLS *	8	7	8	8	11.488	+ 1.307		+ .122		12.917 = 12	+ 4
FORT EUSTIS - USATSCH *	21	14	14	11	11.378	+ 1.923				13.301 = 13	+ 2
FORT GORDON *	22	21	13	26	16.760	+ 2.143				18.903 = 18	- 8
FORT KNOX *	18	12	12	9	7.748					7.748 = 8	- 1
FORT LEAVENWORTH -	6	1	6	9	7.026				-1.041	5.985 = 6	- 3
USACAC - (CD) *											
USACAC - (NUCLEAR WEAPONS) *											
USACAC - (OPER, TNG, & PLAN) *											
USACAC - (FORCE DEVELOPMENT) *											
USATRAC - (OPER, RESEARCH/SYS ANALYSIS) *	5	4	3	4	7.603				-1.041	6.562 = 7	+ 3
FORT LEE	17	13	16	15	11.442	+ 2.165				13.607 = 13	- 2
FORT LEONARD WOOD	18	12	12	15	14.403	+ 2.847				17.250 = 17	+ 2
FORT McCLELLAN - USACMLS *	15	6	8	7	7.062	+ 1.087				8.149 = 8	+ 1
FORT McCLELLAN - USAMPS *	14	7	7	9	7.969	+ 1.307				9.276 = 9	0
REDSTONE ARSENAL - USAOMMCS *	9	5	16	13	13.560					13.560 = 13	0
FORT RUCKER *	22	18	16	19	13.485	+ 1.109		+1.580		16.174 = 16	- 3
FORT SILL	15	8	7	12	11.929					11.929 = 12	0
TRADOC TOTAL	302	193	212	237						=238	+ 1
FORT BRAGG *	16	14	12		9.071					9.071 = 9	
FORT SAM HOUSTON *	39	27	43		33.325	+ 2.451	+.720			36.496 = 36	
TOTAL	357	234	267							=283	

*Measurement Locations

**Required, Authorized, Assigned and Delta for Fort Devens are included in Fort Huachuca count.

FIGURE 5-1

Total - 238

BREAK-OUT BY LOCATION

OF MEASUREMENT WLF COUNTS

APPLICATION WLFs

LOCATION	WLFs		
	WLF #2	WLF #4	WLF #8
FT. SAM HOUSTON	99	3	32
FT. BRAGG	5	1	7
ABERDEEN PROVING GROUND	2	5	29
FT. BEN HARRISON/USAAG	4	3	24
FT. BEN HARRISON/FINANCE	1	0	3
FT. BEN HARRISON/R&R	0	0	3
FT. BENNING	1	0	5
FT. DEVENS	0	0	12
FT. EUSTIS/USAAVLS	1	1	21
FT. EUSTIS/USATSCH	5	2	16
FT. GORDON	9	4	34
FT. HUACHUCA	8	13	9
FT. KNOX	3	0	4
FT. LEAVENWORTH, USACAC	4	0	0
FT. LEAVENWORTH, USATRAC	7	0	0
FT. McCLELLAN, USACMLS	3	0	1
FT. McCLELLAN, USAMPS	4	1	3
FT. RUCKER	4	17	9
REDSTONE ARSENAL	3	4	25
FT. BLISS	4	4	20
FT. LEE	5	4	14
FT. LEONARD WOOD	4	3	29
FT. SILL	5	5	15

WLF #2 - AN OFFICER AREA OF CONCENTRATION SUPPORTED
WLF #4 - A WARRANT OFFICER MILITARY OCCUPATIONAL SPECIALTY CODE SUPPORTED
WLF #8 - AN ENLISTED MILITARY OCCUPATIONAL SPECIALTY SUPPORTED

FIGURE 5-2

APPLICATION WLFs
CIVILIAN PROPONENT ADDITIVE

LOCATION	WLF
	WLF #14
ABERDEEN PROVING GROUND	68
FT. EUSTIS/USAAVLS	12
FT. EUSTIS/USATSCH	40
FT. GORDON	50
FT. HUACHUCA	8
FT. McCLELLAN, USAMPS	12
FT. RUCKER	3
FT. McCLELLAN, USACMLS	2
FT. SAM HOUSTON	64
FT. LEONARD WOOD	82
FT. LEE	51
FT. BENJAMIN HARRISON, USAAG	18

WLF #14 - A JOB SERIES MANAGED

FIGURE 5-3

BREAK-OUT BY LOCATION

OF APPLICATION WLF COUNTS

USAOCS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
91A	913A	63Z
91B	914A	63B
	915A	63E
	915D	63D
	915E	63N
		63T
		44E
		52X
		62B
		63H
		45Z
		41C
		45G
		45K
		52C
		52D
		52F
		44B
		45B
		45E
		45L
		45D
		45N
		45T
		63G
		63J
		63S
		63W
		63Y

USA ADJUTANT GENERAL WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
42A	420A	71C
42B	420C	71L
41A	420D	75B
42C		75C
		75D
		75E
		75F
		75Z
		02B
		02C
		02D
		02E
		02F
		02G
		02H
		02J
		02K
		02L
		02M
		02N
		02T
		02U
		02Z
		02S

USA FINANCE SCHOOL WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
44A	N/A	73C 73D 73Z

USA RECRUITMENT & RETENTION WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
N/A	N/A	00E 00R 79D

USAIS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
11A	N/A	11B 11C 11H 11M 11Z

USAIDS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
N/A	N/A	98C
		98D
		98G
		98H
		98J
		98K
		98Z
		33R
		33T
		33V
		33Y
		33Z

USAAVLS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
15D	151A	67A
		67N
		67V
		67S
		67X
		67Z
		68B
		68D
		68F
		68G
		68H
		68J
		68K
		67G
		67H
		67R
		67T
		67U
		67Y
		67B
		68X

USATSCH WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
88A	880A	88H
88B	881A	88K
88C		88L
88D		88M
88E		88N
		88P
		88Q
		88R
		88S
		88T
		88U
		88V
		88W
		88X
		88Y
		88Z

USASIGS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
25A	250A	25P
25B	250B	25Q
25C	251A	25R
25D	256A	25S
25E		25Z
53A		29E
53B		29J
53C		29N
53X		29S
		29V
		29W
		29Y
		29Z
		39C
		39D
		39E
		39G
		74C
		31M
		31Q
		39V
		31K
		31V
		31C
		31L
		31Y
		31N
		31D
		31F
		31W
		31Z
		74D
		74F
		74Z

USAICS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
35A	350B	96B
35B	350D	96D
35C	350L	96H
35D	351C	96R
35E	351E	96Z
35F	352C	97B
35G	352D	97E
15C	352G	97G
	352H	97Z
	352J	
	352K	
	353A	
	351B	

USAARMS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
12A	N/A	19D
12B		19E
12C		19K
		19Z

USACAC WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
50A	N/A	N/A
52A		
52B		
54A		

TRAC WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
49A	N/A	N/A
49B		
49C		
49D		
49E		
49W		
49X		

USACMLS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
74A	N/A	54B
74B		
74C		

USAMPS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
31A	311A	95B
31B		95C
31C		95D
31D		

USAAVNC WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
15A	150A	68L
15B	152G	68N
15C	152B	68P
15E	152C	68Q
	152D	68R
	152F	93B
	153A	93C
	153B	93D
	153C	93P
	153D	
	154A	
	154B	
	154C	
	155A	
	155D	
	155E	
	156A	

USAOMMCS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
91C	910A	24H
91D	911A	24K
91E	912A	27B
	918A	27E
		27F
		27G
		27H
		27J
		27K
		27L
		27M
		27N
		27T
		27V
		27X
		27Z
		35H
		35Y
		39B
		55B
		55D
		55G
		55R
		55X
		55Z

USAES WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
21A	210A	00B
21B	213A	51B
21C	215D	51G
21D		51H
		51K
		51M
		51R
		51T
		51Z
		52E
		52G
		62E
		62F
		62G
		62H
		62J
		62N
		81B
		81C
		81Q
		81Z
		82B
		82D
		83E
		83F
		12B
		12C
		12F
		12Z

THIS LOCATION WAS NOT A MEASUREMENT SITE.

USAQMCS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
92A	920A	43E
92B	920B	43M
92D	921A	57E
92F	922A	57F
92G		76C
		76P
		76V
		76X
		76Y
		76Z
		77L
		77W
		94B

THIS LOCATION WAS NOT A MEASUREMENT SITE.

USAADAS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
14A	140A	16J
14B	140B	14R
14D	140D	14S
14E	140E	16D
		16E
		16F
		16P
		16R
		16S
		16T
		16Z
		23R
		24C
		24G
		24M
		24N
		24R
		24T
		25L
		14D

THIS LOCATION WAS NOT A MEASUREMENT SITE.

USAFAS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
13A	130A	13B
13B	130B	13C
13C	131A	13E
13D	131B	13F
13E	132A	13M
		13N
		13P
		13R
		13T
		13Z
		15E
		17B
		21G
		82C
		93F

THIS LOCATION WAS NOT A MEASUREMENT SITE.

USAAHS WLF COUNTS USED FOR APPLICATION

WLF #2		WLF #4	WLF #8
67A	61A	670A	01H
67B	61B	600A	35G
67C	61C	640A	42C
67D	61D		42D
67E	61E		42E
67G	61F		71G
67F	61G		76J
67H	61H		91A
67J	61J		91B
67K	61K		91C
67L	61L		91D
68A	61M		91E
68B	61N		91F
68C	61P		91G
68F	61Q		91H
68D	61R		91J
68E	61U		91L
68G	61W		91M
68H	61Z		91N
68J	62A		91P
68K	62B		91Q
68L	63A		91R
68M	63B		91S
68N	63D		91T
68P	63E		91U
68R	63F		91V
68S	63H		91W
68T	63K		91X
68U	63M		91Y
60A	63N		92B
60C	63P		92E
60B	63R		35U
60D	64A		
60F	64B		
60G	64C		
60H	64D		
60J	64E		
60K	64F		
60L	65A		
60M	65B		
60N	65C		
60P	66A		
60Q	66B		
60R	66C		
60S	66D		
60T	66E		
60U	66F		
60V	66G		
60W	66H		
	66J		

USAJFKSWCS WLF COUNTS USED FOR APPLICATION

WLF #2	WLF #4	WLF #8
18A	180A	18B
38A		18C
39A		18D
39B		18E
39C		18F
		18Z
		37F

USAOCS WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
91A	913A	63Z
91B	914A	63B
	915A	63E
	915B	63D
	915C	63N
	915D	63T
	915E	44E
		52X
		62B
		63H
		45Z
		41C
		45G
		45K
		52C
		52D
		52F
		44B
		45B
		45E
		45L
		45D
		45N
		45T
		63G
		63J
		63S
		63W
		63Y

USA ADJUTANT GENERAL WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
42A	420A	71C
42B	420C	71L
41A	420D	75B
42C		75C
		75D
		75E
		75F
		75Z
		02B
		02C
		02D
		02E
		02F
		02G
		02H
		02J
		02K
		02L
		02M
		02N
		02T
		02U
		02Z
		02S

USA FINANCE SCHOOL WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
44A	N/A	73C 73D 73Z

USA RECRUITMENT & RETENTION WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
N/A	N/A	00E 00R 79D

USAIS WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
11A	N/A	11B
11B		11C
11C		11H
		11M
		11Z

USAIDS WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
N/A	N/A	98C
		98D
		98G
		98H
		98J
		98K
		98Z
		33R
		33T
		33V
		33Y
		33Z

USAAVLS WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
15D	151A	67A
		67N
		67V
		67S
		67X
		67Z
		68B
		68D
		68F
		68G
		68H
		68J
		68K
		67G
		67H
		67R
		67T
		67U
		67Y

USATSCH WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
88A	880A	88H
88B	881A	88K
88C		88L
88D		88M
88E		88N
		88P
		88Q
		88R
		88S
		88T
		88U
		88V
		88W
		88X
		88Y
		88Z

USASIGS WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
25A	250A	25P
25B	250B	25Q
25C	251A	25R
25D	256A	25S
25E		25Z
25F		29E
53A		29J
53B		29M
53C		29N
53X		29S
		29T
		29V
		29W
		29Y
		29Z
		39C
		39D
		39E
		39G
		74C
		31M
		31Q
		39V
		39L
		31G
		31K
		31V
		31C
		31L
		31Y
		31N
		31D
		31F
		31W
		31Z
		74D
		74F
		74Z
		39X

USAICS WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
35A	350B	96B
35B	350D	96D
35C	350L	96H
35D	351C	96R
35E	351E	96Z
35F	352C	97B
35G	352D	97E
15C	352G	97G
	352H	97Z
	352J	
	352K	
	353A	
	351B	

USAARMS WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
12A	N/A	19D
12B		19E
12C		19K
		19Z

USACAC WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
50A	N/A	N/A
52A		
52B		
54A		

TRAC WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
49A	N/A	N/A
49B		
49C		
49D		
49E		
49W		
49X		

USAAVNC WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
15A	150A	68L
15B	152G	68N
15C	152B	68P
15E	152C	68Q
	152D	68R
	152F	93B
	153A	93C
	153B	93D
	153C	93P
	153D	
	154A	
	154B	
	154C	
	155A	
	155D	
	155E	
	156A	

USAOMMCS WLF COUNTS USED FOR MEASUREMENT

WLF #2	WLF #4	WLF #8
91C	910A	21L
91D	911A	24H
91E	912A	24K
	918A	27B
		27E
		27F
		27G
		27H
		27J
		27K
		27L
		27M
		27N
		27T
		27V
		27X
		27Z
		35H
		35Y
		39B
		46N
		55B
		55D
		55G
		55R
		55X
		55Z

USAAHS WLF COUNTS USED FOR MEASUREMENT

WLF #2		WLF #4	WLF #8
	61A	670A	01H
[illegible]	61B	600A	35G
67C	61C	640A	42C
67D	61D		42D
67E	61E		42E
67G	61F		71G
67F	61G		76J
67H	61H		91A
67J	61J		91B
67K	61K		91C
67L	61L		91D
68A	61M		91E
68B	61N		91F
68C	61P		91G
68F	61Q		91H
68D	61R		91J
68E	61U		91L
68G	61W		91M
68H	61Z		91N
68J	62A		91P
68K	62B		91Q
68L	63A		91R
68M	63B		91S
68N	63D		91T
68P	63E		91U
[illegible]	63F		91V
	63H		91W
[illegible]	63K		91X
68U	63M		91Y
60A	63N		92B
60C	63P		92E
60B	63R		35U
60D	64A		
60F	64B		
60G	64C		
60H	64D		
60J	64E		
60K	64F		
60L	65A		
60M	65B		
60N	65C		
60P	66A		
60Q	66B		
60R	66C		
60S	66D		
60T	66E		
60U	66F		
60V	66G		
60W	66H		
	66J		